## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

#### (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date29 December 2004 (29.12.2004)

PCT

# (10) International Publication Number WO 2004/112485 A1

(51) International Patent Classification<sup>7</sup>: A21C 3/04, B21C 23/00, B29C 47/06, 47/20, 47/26, 47/28, 47/24

(21) International Application Number:

PCT/HU2004/000018

(22) International Filing Date: 27 February 2004 (27.02.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: P0301905

20 June 2003 (20.06.2003) HU

(71) Applicant (for all designated States except US): DR-PACK II. LTD [HU/HU]; Budai Str. 10., H-2051 BIATORBÁGY (HU).

(72) Inventors; and

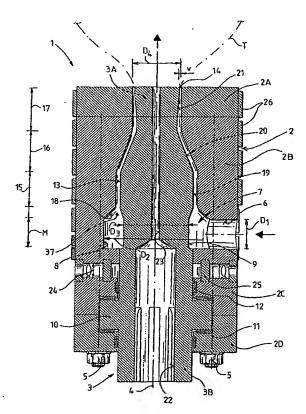
(75) Inventors/Applicants (for US only): PELCZ, Antal

[HU/HU]; Seregély Str. 3, H-2040 Budaörs (HU). ILLÉS, Tamás [HU/HU]; Rákóczi Str. 1, H-8913 Lakhegy (HU). SZABÓ, Lajos [HU/HU]; Ibolya Str. 8., H-2038 Sóskút (HU).

- (74) Agent: MARKÓ, József; Bajcsy-Zsilinszky str. 16, Danubia Patent & Trademark Attorneys, H-1051 Budapest (HU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

## (54) Title: PROCESS AND EXTRUDER NOZZLE FOR PRODUCING TUBULAR EXTRUDED PRODUCTS



(57) Abstract: This invention relates to a process and an extruder nozzle (1) for extruding tubular products, particularly blown plastic foil hoses (T). This process comprises the steps of feeding a pressurized material into an extruder nozzle (1) through an inlet (6), and forcing this material flow through a duct formed between an outer and an inner nozzle components (2, 3), then shaping the tubular product by pressing the material flow through an annular aperture (14) at the duct end. The essence lies in that the material flow entering the extruder nozzle (1) is distributed first by feeding into an annular expansion chamber (7), the cross-section of which is selected much greater, that of the inlet (6). When the expansion chamber (7) has been completely filled up by the material whose pressure has become higher than the flow resistance of an homogenizing ring channel (13) having a cross-section narrowed to and connected to the annular expansion chamber (7) then in the homogenizing ring channel (13) the material flow is forced to move in cross direction to the entering direction thereof, and it is homogenized by the relative rotation of surfaces partly delimiting at least the homogenizing ring channel (13). The material flow is led to a drawing aperture (14) by way of a helical forced movement.

### WO 2004/112485 A1

10.00 5 (4.00 ) | 0.00 | 0.00 5 (4.00 5

GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

with amended claims and statement

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

#### Published:

with international search report